

Application Serial No.: 10/615,976
Reply to Office Action dated October 2, 2006

IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 1, 2, 3(a)-3(c), 4(a)-4(b), and 5(a)-5(b). These sheets, which include Figs. 1, 2, 3(a)-3(c), 4(a)-4(b), and 5(a)-5(b), replace the original sheets including Figs. 1, 2, 3(a)-3(c), 4(a)-4(b), and 5(a)-5(b).

Attachment: Replacement Sheets

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5, 7, 8, and 10-33 are presently pending in this case. Claims 1-5, 7, 8, 10-15, 17, 19, 21, 23-25, 27-29, and 32 have been amended and Claims 6, 9, and 34 have been canceled without prejudice or disclaimer by way of the present Amendment. Pending Claims 25-33 have been withdrawn from consideration as being drawn to a non-elected invention. Care has been taken such that no new matter has been entered.

In the outstanding Official Action, the abstract of the disclosure was objected to because of minor informalities. Accordingly, a substitute Abstract of the Disclosure has been added in place of the original abstract. Accordingly, the Applicants request the withdrawal of the objection to the abstract.

The drawings were objected to for minor informalities. Submitted concurrently herewith are Replacement Sheets that include changes to Figures 1, 2, 3(a)-3(c), 4(a)-4(b), and 5(a)-5(b) to add the legend "Prior Art" to address the objections. Accordingly, the Applicants request the withdrawal of the objection to the drawings.

Claim 23 was objected to because of a minor informality. Claim 23 has been amended in a manner consistent with the suggested amendment in the Official Action. Accordingly, the Applicants request the withdrawal of the objection to Claim 23.

Claims 1-24 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 24 have been amended to place them into more common U.S. format, thus clarifying that the body of the claim begins after "comprising:" on

line 1. The recitation of “at least one absent location...” has been clarified by changing it to “intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel” as can be seen, for example, with reference to numerals 42 and 43 in Figure 8(d). Additionally, Claim 13 has been amended to clarify the recitation of the hydrophilic/hydrophobic properties, and Claim 14 has been clarified by not positively reciting the properties of the fluid to be fed therethrough. Claim 23 has been amended to clarify that a fine channel device is being claimed comprising a plurality of fine channels. The Applicants submit that the language of the claims is clear to one of ordinary skill in the art. Accordingly, the Applicants respectfully request the withdrawal of the indefiniteness rejections.

Claims 1-3 and 10-17 were rejected under 35 U.S.C. 102(e) as being anticipated by Young et al. (U.S. Pub. No. 2003/0226806). Claims 4, 7, 9, 19, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al. Claims 5, 6, and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al. in view of Giddings (U.S. Patent No. 4,894,146). Claims 8, 18, and 21-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al. in view of Christel et al. (U.S. Patent No. 6,368,871). Claims 1-4, 8, 12-14, and 21-23 were rejected under 35 U.S.C. 102(b) as being anticipated by Christel et al. Claims 5, 6, and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Christel et al. in view of Giddings. Claims 7, 18, and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Christel et al. For the reasons discussed below, the Applicants request the withdrawal of the art rejections.

Regarding the anticipation rejections of independent Claim 1, a claim is anticipated

only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference. As will be demonstrated below, the Young et al. and Christel et al. references clearly do not meet each and every limitation of independent Claim 1.

Claim 1 has been amended to incorporate the subject matter of previously pending Claims 2 and 6. As noted in the Official Action, the Young et al. reference and the Christel et al. reference fail to disclose the features of previously pending Claim 6. Thus, Claim 1 is not anticipated by these references.

Furthermore, with regard to the rejection of previous Claim 6 and Claim 24, the basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicants submit that a *prima facie* case of obviousness has not been established in the present case because (1) the references, either when taken singularly or in combination, do not teach or suggest all of the claim limitations, and (2) there is no suggestion or motivation to modify the references to arrive at the present invention.

Claim 1 recites a fine channel device comprising a fine channel provided with at least two inlet ports for feeding fluid, inlet channels communicated with the inlet ports, a confluent portion communicated with the inlet channels, a branch portion communicated with the fine channel, from which at least two outlet channels are branched to feed predetermined amounts of fluid, and outlet ports communicated with the outlet channels. The fine channel is

provided with a plurality of partition walls arranged along a boundary formed by at least two kinds of fluid fed from the inlet ports so as not to cause mutual contamination of fluid. The plurality of partition walls are spaced apart at intervals in a flowing direction of fluid, wherein intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel.

The Official Action notes that the Young et al. reference does not disclose the subject matter of previously pending Claim 6, which has been incorporated into Claim 1. (Page 10 of the Official Action.) The Young et al. reference clearly does not disclose intervals between the partition walls that are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel as defined in Claim 1. The Official Action cites the Giddings reference to cure the above noted deficiency in the teaching of the Young et al. reference.

The Giddings et al. reference describes a thin channel split flow process for particle fractionation that effects separation of the particles. The Official Action cites physical splitter (15a) as the partition wall located in the vicinity of a confluent portion, and physical splitter (15d) as the partition wall located in the vicinity of the branch portion. However, the Giddings reference does not disclose or even suggest a plurality of such walls spaced apart at intervals in a flowing direction of fluid. Thus, one of ordinary skill in the art would not have looked at splitters (15a, 15d) as being equated with the channel structures (200) of the Young et al. reference, or as being used to modify the teachings of the channel structures (200) of the Young et al. reference. The Giddings reference clearly does not teach or suggest intervals (plural term) between the splitters (15a, 15d) are present along the entire length of the

channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the channel. No such intervals are disclosed or suggested, and thus providing a portion or portions where no intervals are present would not have been gleaned by one of ordinary skill in the art at the time of the present invention, absent hindsight reconstruction of the present invention.

Similarly, the Official Action notes that the Christel et al. reference does not disclose the subject matter of previously pending Claim 6, which has been incorporated into Claim 1. (Page 15 of the Official Action.) The Christel et al. reference clearly does not disclose intervals between the partition walls that are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel as defined in Claim 1. The Official Action cites the Giddings reference to cure the above noted deficiency in the teaching of the Christel et al. reference. For the same reasons noted above, the Giddings reference fails to supplement these deficiencies, and one of ordinary skill in art would not have been motivated to combine these references to arrive at the present invention absent hindsight considerations.

Claim 24 recites a fine channel device comprising, among other features, intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel. Thus, for the same reasons noted above with respect to Claim 1, the Applicants submit that the combination of the Young et al. reference and the Giddings reference and the combination of the Christel et al. reference and the Giddings reference fail to establish *prima facie* cases of obviousness with respect to Claim 24.

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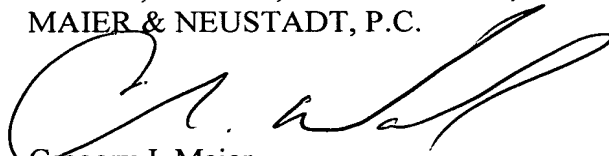
Accordingly, the Applicants respectfully request the withdrawal of the obviousness rejections of independent Claims 1 and 24.

The dependent claims are considered allowable for the reasons advanced for the independent claim from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of their respective independent claim.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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